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Griffin et al.

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(54) **X-RAY CELLS AND OTHER COMPONENTS
HAVING GAS CELLS WITH
THERMALLY-INDUCED DENSITY
GRADIENTS**

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CPC **H05G 2/003** (2013.01); **H05G 2/008**
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(58) **Field of Classification Search**
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(57) **ABSTRACT**

A method includes creating a gas flow in a gas cell and
cooling a portion of the gas flow to create a thermally-
induced temperature gradient in the gas flow. The method
also includes directing at least one laser beam through at
least a portion of the gas flow with the thermally-induced
temperature gradient. The gas flow can be directed axially
along a length of the gas cell or transverse to the length of
the gas cell, and the at least one laser beam can be directed
axially along the length of the gas cell through at least the
portion of the gas flow. The gas flow may represent a first gas
flow, and the method may further include creating a second
gas flow in the gas cell and cooling a portion of the second
gas flow to create a thermally-induced temperature gradient
in the second gas flow.

20 Claims, 12 Drawing Sheets

